

263A

potentiostat/galvanostat



- The ideal potentiostat/galvanostat system for many laboratories
- Computer controlled Potentiostat and Galvanostat Operation
- Optional floating system capabilities
- 20 V compliance and 200 mA Current output

Model 263A

The 263A potentiostat/galvanostat is the ideal system for many laboratories. Perfect for the budget conscious researcher who demands high performance. The 263A may be upgraded with many different options. This impressive combination of price and performance makes it a tremendous value for today's electrochemist or corrosion specialist.

The 263A provides all the capabilities you need in your laboratory:

- Computer controlled potentiostat and galvanostat operation
- 20 V compliance and 200 mA current output
- 16 V scan range
- Fast data acquisition (30 μ s)
- Optional full front panel control
- Impedance capable
- Optional float capability (263A/99)
- Optional 2 A current module (2A/263A)
- Optional auxiliary input (263A/98)

Use the 263A in the following market segments:

- Research Electrochemistry
- Corrosion
- Sensors
- Batteries/Fuel Cells
- Electrodeposition/Plating
- Biomedical Applications

The 263A, a worldclass potentiostat/galvanostat system!

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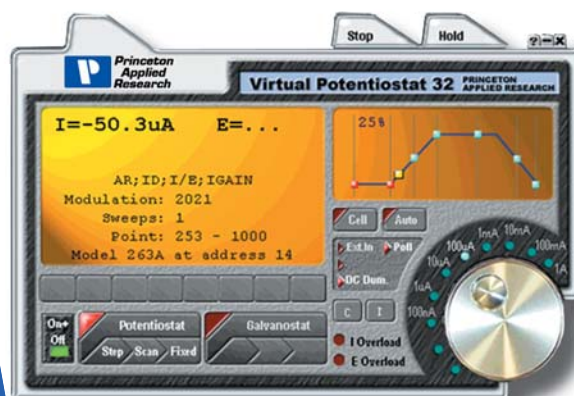
Hardware

With ease of use in mind, the 263A is simple to operate without extensive training. Its built-in self calibration assures you of quality data each time you use it. Instrument check-out is simple. Select the Dummy Cell, enter a voltage, click the cell on, and see that the current displayed matches the expected value (263A-2).

The 263A can be supplied without a front panel. The functionality of the front panel may be replaced with our **Virtual Potentiostat** software that is supplied with the instrument. A fully functional front panel is available at initial purchase or any time afterwards. Its analog look and feel lets you start acquiring data the moment you unpack the system. The 263A gives you the best of both worlds. You decide if you want the hands-on control of the front panel or the ease of computer control, and if you can't decide... take both!

The 263A's 20 V compliance and 200mA output capability provide the current and voltage specifications required for many applications. The 100 nA current range (full scale) gives the 263A very good sensitivity with nanoamp resolution. Under software control, you can access the 10 nA and 1 nA current ranges with resolutions as low as 2 pA!

Our extensive line of applications software makes computer data acquisition and analysis a snap. Whether it is basic research or electrochemical impedance, we have the software that will make your 263A the most versatile instrument in your lab. If your needs go beyond the already feature-rich 263A base system, more than likely you can still get there with one of our numerous options.



Software

The 263A can be coupled with either one of our extremely sensitive single sine analyzers (5210 Lock-in Amplifier or FRD100 Frequency Response Detector) to perform AC impedance measurements. Our powerful impedance software module, PowerSINE™, drives this complete DC/AC system.

The 2A/263A High Current option provides a 2 A current capability, which allows researchers to experiment with larger electrodes or perform corrosion experiments that require higher currents.

The 263A/98 Auxiliary Input option provides an external input to the analog-to-digital converter. This lets the researcher interface to ancillary devices such as rotating electrodes or quartz crystal analyzers and temperature controllers. The 263A/99 Floating/Auxiliary Input option allows the researcher to use the 263A for floating ground experiments. This options useful for autoclaves and grounded working electrodes. It includes the /98 Auxiliary Input option.

PowerSINE	Electrochemical Impedance Spectroscopy
PowerCORR	Corrosion Measurement
PowerCV	Cyclic Voltammetry
PowerPULSE	Electroanalytical Software
PowerSTEP	Chronoamperometry / Chronopotentiometry

(software sold separately)

Computer Interface

GPB IEEE-488

Operating System

Microsoft Windows 95/98/2000/NT/XP/VISTA/

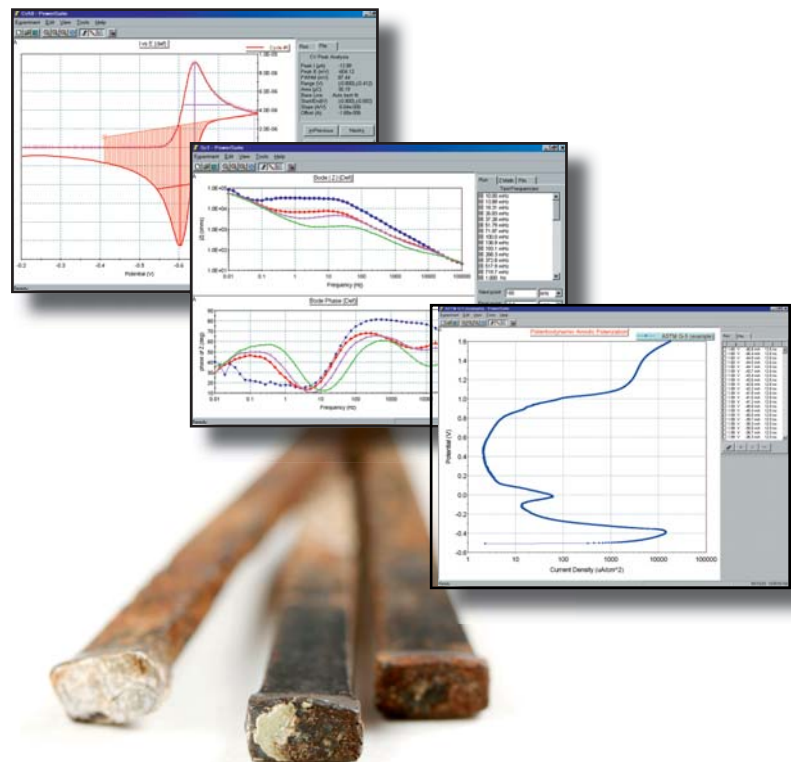
Options

Model

2A/263A
263A/98
263A/99

Description

2A High Current Option
Auxiliary Input Option
Floating/Auxiliary Input Option



263A ordering information

Specifications

Power Amplifier	
Compliance Voltage	±20 V
Maximum Current	±200 mA
Rise Time	<1 µs (no Load)
Slew Time	>1 V/µs (No Load)

System Performance	
Minimum Time Base	30 µs
Minimum Potential Step	250 µV
Noise and Ripple	<50 mV/rms (typical)
Minimum Current Range	100 nA (hardware)
Minimum Current Range	1 nA*
Minimum Current Resolution	2 pA

iR Compensation	
Positive Feedback Range	20 MΩ to 20 Ω (depending on current range)
Current interrupt	12 bit DAC Potential Error Correction

Current Measurement	
Ranges	7 decades, 100 mA to 100 nA
Accuracy (dc)	10 µA to 100 µA: <0.4% Full Scale 100 nA and 1 µA Ranges: <0.5% ±5 nA Full Scale

Differential Electrometer	
Input Bias Current	<50 pA at 25°C
Max. Voltage Range	± 10 V
Max. Input Voltage Differential	± 10 V
Bandwidth	-3 dB @ >4 MHz
Offset Voltage	<100 mV
Offset Temperature Stability	<50 mV°C
Common Mode Rejection	>70 dB at 100 Hz >60 dB at 100 kHz
Input Impedance	>10 ¹² Ω in parallel with 20 pf

General	
Power	90 - 130 V ac or 200 - 260 V ac, 50 - 60 Hz
Dimensions	17.5" W x 18.5" D x 5.5" H
Weight	16 kg (35 lbs)
Temperature	0 - 50° C
Humidity	95% maximum relative humidity, non-condensing
Altitude	Up to 2,000 m

*This sensitivity is achieved through our proprietary application software



www.princetonappliedresearch.com
pari.info@ametek.com

USA

801 South Illinois Avenue
Oak Ridge
TN 37831-0895 USA

Tel: (865) 425-1289
or (865) 482-4411

Fax: (865) 481-2410

Europe

Unit B1 Armstrong Mall
Southwood Business Park
Farnborough
Hampshire GU14 0NR UK

Tel: +44 (0)1252 556800

Fax: +44 (0)1252 556899

